REMARKS

Claims 63-84 are pending in the application. Claims 63-84 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable in view of Inniss et al. (U.S. Patent No. 5,708,832), Wilson (U.S. Patent No. 6,718,347), Popelka (U.S. Patent No. 6,081,883), Kern (U.S. Patent No. 6,870,537), Nazari (U.S. Patent No. 6,405,201) and Mattis et al. (U.S. Patent No. 6,128,627). Of the Claims, Claims 63, 73 and 83 are independent. Claim 85 is newly added. Support for the newly added claim is in the Applicants' specification as originally filed. (*See*, for example, Fig. 1, VFS (50), Storage Cluster (70), File System Control (60), Object Recipient (80), control path and data path (object file requests, object files); Page 11, lines 1-8; and Page 29, line 20 – Page 31, line 4.) The application as amended and argued herein, is believed to overcome the rejections.

Regarding Rejections under 35 U.S.C. § 103(a)

Claims 63-64, 71, 73-74, 81 and 83 are rejected under 35 U.S.C. §103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson (U.S. Patent No. 6,718,347).

Claims 65 and 75 are rejected under 35 U.S.C. §103(a) as being unpatentable over Inniss et al. (U.S. Patent No. 5,708,832) in view of Wilson, and further in view of Nazari (U.S. Patent No. 6,405,201).

Claims 66-69 and 76-79 are rejected under 35 U.S.C. §103(a) as being unpatentable over Inniss et al. in view of Wilson, and further in view of Popelka et al. (U.S. Patent No. 6,081,883).

Claims 70 and 80 are rejected under 35 U.S.C. §103(a) as being unpatentable over Inniss et al. in view of Wilson, and further in view of Kern et al. (U.S. Patent No. 5,870,537).

Claims 72, 82 and 84 are rejected under 35 U.S.C. §103(a) as being unpatentable over Inniss et al. in view of Wilson, and further in view of Mattis et al. (U.S. Patent No. 6,128,627).

An embodiment of the Applicants' invention is directed to a network storage system that includes a plurality of storage centers and a virtual file system. The virtual files system stores information for a single file system. The client receives a storage resource locator from the virtual file system to access a file in the file system. The client transmits the received resource

storage locator to one of the storage centers to download the file over a wide area, public access network. (*See*, for example, Fig. 1.)

Turning to the cited references, Inniss discusses a data processing network in which access to a distributed resource is fully transparent to the user. As shown in Fig. 2, a client communicates directly only with a single server. Other servers export storage space to that server. The server redirects a file request received from the client to one of the other servers based on an access list. A LAN command is translated to a file access system command at a network level such that the client can access files as if they were resident on the client

Wilson discusses a system for maintaining coherence among copies of a database shared by multiple computers with data stored in storage subsystems. (*See* Wilson Fig. 3 and Abstract.)

Nazari discusses a distributed computer system that includes fault tolerant servers.

Popelka discusses a scalable file server that includes a host processor, network processors and file storage processors that communicate over an interconnect bus. Client computers are connected over a network to one or more network processors. File requests received by a network processor from client computers are forwarded for processing over the interconnect bus to file storage processors. (*See* Popelka, Fig. 1.)

Mattis discusses a method for detecting duplicate objects that have the same content but different names. An object key based on the contents of the object is used to index the cache. (*See* Mattis, col. 9, lines 24-28.)

Kern discusses a disaster recovery system that provides remote data shadowing by storing a mirror image (logical or physical) of a primary device on a secondary device. Upon detecting a failure in the primary data storage device, all access is swapped (switched) to the secondary data storage device. (*See* Kern col. 9, lines 14-31 and col. 12, lines 1 -28 and Figs 1 and 5.)

To establish a prima facie case for obviousness under 35 U.S.C. 103(a), (1) there must be some suggestion or motivation to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the references when combined must teach or suggest all the claim limitations. For the reasons discussed below, it is respectfully submitted that the Office has not established a prima facie case under 35 U.S.C. 103(a) for claims 63-84 and that therefore, claims 63-84 are allowable.

The references singly or in combination do not teach or suggest all the claim limitations

All Claim limitations must be taught or suggested. (*See* MPEP 2143.03). Even if the references are combined, all of the claim elements are not shown in the combination of the cited references.

Inniss' discussion of a data processing network does not teach or suggest at least:

"a plurality of storage centers, located in geographically disparate locations from each other, the client and the VFS, and coupled to the client through a wide area, public access network"

as claimed by the Applicants in claim 63.

In contrast, Inniss merely discusses a virtual machine of a client that is accessible through a single server or a virtual machine system having a plurality of servers. The single server redirects the file request for the client so that the client does not need detailed knowledge of the network. (*See*, Inniss Figs. 2, 3, server A 24, client 22, col. 3, lines 42-61.) In a virtual machine system having a plurality of servers, the client must communicate directly with the server that owns the file. (*See*, Inniss, Fig. 1, col. 3, lines 25-41.)

In an embodiment of the Applicants' invention, the storage centers, client and VFS are located in geographically disparate locations from each other. (*See*, for example, Fig. 1, VFS 50, storage cluster 70, object recipient 80, and Page 5, lines 8-10.)

> "the client receives a storage resource locator ("SRL") from the VFS to access a file in the single file system ... the client of the network storage system transmits the received SRL to one of the storage centers over the public access network to download the file over the wide area, public access network"

as claimed by the Applicants in claim 63.

Inniss does not teach or suggest that a client "receives a storage locator ("SRL") from the VFS" and then "transmits the received SRL to one of the storage centers over the public access network". In contrast, Inniss merely discusses that a client issue all file requests to a single server. The single server then handles forwarding the file requests for the client so that the client

does not need detailed knowledge where the files are stored. (*See*, Inniss, Fig. 2, client 22, server A 24, server B 26, server C 28.)

Furthermore, Inniss does not teach or suggest the Applicants' claimed "SRL" which:

"includes a public access network address for a storage center to access one of the storage centers over the wide area, public access network and a unique identifier associated with the contents of the file to uniquely identify a file stored at one of the storage centers."

as claimed by the Applicants in claim 63.

In contrast, in the system discussed by Inniss, files stored in other servers are mounted on the single server so that all files are accessible by the client through the single server. As the client communicates directly only with a single server over a local area network, there is no suggestion of a "public access network address for a storage center to access one of the storage centers over the wide area, public access network to uniquely identify the file stored at one of the storage centers".

The additional references Wilson, Popelka, Nazari and Mattis fail to cure the deficiencies of Inniss noted above. The additional references Wilson, Popelka, Nazari and Mattis fail to disclose or suggest at least "a file identifier associated with the contents of the file" and so fail to disclose the invention as recited in claim 63.

Claims 64-72 and 85 are dependent claims that depend directly or indirectly on claim 63 which has already been shown to be non-obvious over the cited art.

Furthermore, Mattis does not teach or suggest:

"a file handler including a digital fingerprint derived from the contents of the file"

as claimed by the Applicants in dependent claim 72.

In contrast, Mattis merely discusses using contents of a file as an index to a content indexed cache for storing an object in a cache so that only one copy of duplicate objects having the same content but different names is stored in the content indexed cache. Thus, Mattis merely discusses the use of contents of a file to determine where a file is stored in a cache. There is no

suggestion of "including a digital fingerprint derived from the contents of the file" in a file handler in a network file system request "to identify the file to the remote storage".

Therefore, separately or in combination, Inniss, Wilson, Popelka, Nazari and Mattis do not teach or suggest the Applicants' claimed invention

Claims 64-72 are dependent claims that depend directly or indirectly on claim 63, which has been shown to be non-obvious over the cited art. Independent claims 73 and 83 recite a like distinction and are thus non-obvious over the cited art. Claims 74-82 depend directly or indirectly on claim 73 and are thus non-obvious over the cited references.

Accordingly, the present invention as now claimed is believed to be patentable over the cited references. Acceptance of claims 63-85 is respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that all claims (claims 63-85) are in condition of allowance. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to Deposit Account Number 50-0221.

Respectfully submitted,

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